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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/299,596

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TONG HYONG LEE

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EXAMINER

KARMIS, STEFANOS

ART UNIT

PAPER NUMBER

3624

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/299,596

Applicant(s)

LEE, TONG HYONG

Examiner

Stefano Karmis

Art Unit

3624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date <u>6/9/05</u> . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. This communication is in response to Applicant's amendment filed 13 June 2005.

Status of Claims

2. Claims 17 and 27 are currently amended. Claims 28-33 are currently cancelled. Claims 3-16, 18, 23-24 and 2 have previously been amended. Claims 1 and 2 are previously cancelled. Claims 22, 25 and 33 have been left as originally filed. Therefore claims 3-27 are under prosecution in this application.

Drawings

3. The drawings were received on 18 August 2004. These drawings are accepted.

Response to Arguments

4. Applicant's arguments filed 13 June 2005 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made and discussed below.

Applicant's arguments with respect to claims 3-27 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3624

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 3, 4, 7, 10-14, 16-22, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janning et al. (hereinafter Janning) U.S. Patent 6,446,049 in view of Takami et al. (hereinafter Takami) U.S. Patent 6,536,661.

Claims 3, 10, 16, 17, and 26, Janning teaches an apparatus for transmitting digital information and electronic money comprising: a radio signal receiving block for receiving a radio signal, and automatically determining whether the received radio signal corresponds to general information or balance storing information (column 28, lines 19-

Art Unit: 3624

52 and column 29, lines 5-36); a memory block for storing a storing amount, a content, and certification information (column 28, lines 30-33); a modulation and demodulation unit for implementing a signal transmitting and receiving operation with a card storing unit (column 28, lines 24-29); a computation logic block for comparing a serial number extracted from the received signal with a previously stored serial number if it is determined that the received signal corresponds to balance storing information and is a proper signal (column 28, lines 44-53 and column 29, lines 5-22); and a non-contact block for storing a balance storing amount into the memory block using a card storing unit and reading a balance storing amount of the memory block when paying the money (column 23, lines 14-33). Janning fails to teach storing the balance string extracted from the radio signal after the comparing of the extracted serial numbers. Takami teaches an electronic money transaction system in which a radio transmitter is used and ID's from the radio transmitter are compared to approve electronic money information. Further, after the ID comparison, the IC card stores the transmitted electronic money information into the electronic money information memory (column 12, lines 32-42). It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Janning to include storing the electronic money information as taught by Takami because Janning already teaches memory for storing billing information (column 11, lines 30-44). Storing the balance information after the number (ID) comparison is approved would update the billing information for the next transaction, which has to reference the memory.

Art Unit: 3624

Claim 4, Janning fails to teach storing the balance string extracted from the radio signal after the comparing of the extracted serial numbers. Takami teaches an electronic money transaction system in which a radio transmitter is used and ID's from the radio transmitter are compared to approve electronic money information. Further, after the ID comparison, the IC card stores the transmitted electronic money information into the electronic money information memory (column 12, lines 32-42). It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Janning to include storing the electronic money information as taught by Takami because Janning already teaches memory for storing billing information (column 11, lines 30-44). Storing the balance information after the number (ID) comparison is approved would update the billing information for the next transaction, which has to reference the memory.

Claim 7, the non-contact block includes a modulation and demodulation unit for performing a signal transmitting and receiving operation with a card storing unit or a card reader; and a non-contact computation unit for storing a balance storing data into the memory block at the modulation and demodulation unit in the case of the balance storing operation, reading the balance storing data stored in the memory block in the case of the payment and transmitting the read data to the modulation and demodulation (column 9, line 59 thru column 10, line 32).

Claim 11, the computation logic block is designed to receive first and second balance storing information from the radio signal receiving block and store the amount

Art Unit: 3624

data into the memory block only when the balance storing information is determined to be proper information (column 9, line 59 thru column 10, line 32 and column 28, lines 19-52).

Claims 12 and 13, the process comes to completion when the logic block is designed to stop the service of the terminal when a proper first balance account information is received from the radio signal receiving block or when a balance storing cancellation information is received from the radio signal receiving block during the balance storing operation (column 9, line 59 thru column 10, line 41).

Claim 14, the computation logic block includes a control means for decrypting a balance storing information based on a radio transmission method. Janning fails to teach storing the balance string extracted from the radio signal after the comparing of the extracted serial numbers. Takami teaches an electronic money transaction system in which a radio transmitter is used and ID's from the radio transmitter are compared to approve electronic money information. Further, after the ID comparison, the IC card stores the transmitted electronic money information into the electronic money information memory (column 12, lines 32-42). It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Janning to include storing the electronic money information as taught by Takami because Janning already teaches memory for storing billing information (column 11, lines 30-44). Storing the balance information after the number (ID) comparison is approved would

Art Unit: 3624

update the billing information for the next transaction, which has to reference the memory.

Claim 18, determining the balance storing information, the information is determined to be a balance storing information when there is a certain pattern signal in the received radio signal (column 28, lines 19-52).

Claim 19, the step of various certification includes reading a counter value contained in the balance storing information if it is determined that the serial numbers are the same and determining whether the read counter value is the same as a counter value of a function for the previously stored encryption; determining whether the serial key value outputted via the encryption process in which the counter values are the same as the previously stored key value; and determining that a subscriber is a proper subscriber when the key values are the same (column 28, lines 19-52).

Claim 20, the decryption process of the balance storing information is implemented when the counter value extracted from the balance storing information is the same as the counter value for the previously stored decryption (column 28, lines 19-52).

Claim 21, summing a current balance storing amount and a recent radio balance storing amount to obtain a first summed amount if the subscriber is a proper subscriber and determining whether the first summed amount is below a certain amount;

Art Unit: 3624

determining whether the first summed amount obtained is equal to the second summed amount contained in the balance storing information based on the radio transmission method if the first summed amount is below the certain amount; storing the balance storing data if the first summed amount is equal to the second summed amount; and determining the signal as a balance storing error if the first summed amount is greater than a certain amount or the first summed amount is not equal to the second summed amount (column 27, lines 32-51).

Claim 22, Janning fails to teach storing the balance string extracted from the radio signal after the comparing of the extracted serial numbers. Takami teaches an electronic money transaction system in which a radio transmitter is used and ID's from the radio transmitter are compared to approve electronic money information. Further, after the ID comparison, the IC card stores the transmitted electronic money information into the electronic money information memory (column 12, lines 32-42). It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Janning to include storing the electronic money information as taught by Takami because Janning already teaches memory for storing billing information (column 11, lines 30-44). Storing the balance information after the number (ID) comparison is approved would update the billing information for the next transaction, which has to reference the memory.

Art Unit: 3624

Regarding claim 27, Janning teaches an apparatus for transmitting digital information and electronic money comprising: a radio signal receiving block for receiving a radio signal, and automatically determining whether the received radio signal corresponds to general information or balance storing information (column 28, lines 19-52 and column 29, lines 5-36); a memory block for storing a storing amount, a content, and certification information (column 28, lines 30-33); a computation logic block for comparing a serial number extracted from the received signal with a previously stored serial number if it is determined that the received signal corresponds to balance storing information and is a proper signal (column 28, lines 44-53 and column 29, lines 5-22); setting a temporary service stop state if it is determined that the received balance storing is a proper signal and waiting to receive second balance information (column 21, line 41-61); performing a certification of the second balance information when the second balance information is received and determining whether the second balance information is a proper signal (column 21, lines 41-61);

Wherein said certification step includes: extracting the storing request amount from the first balance information, summing the thusly extracted amount and the balance, and determining whether the summed amount is greater than the storing limit amount; encrypting the value as a certain key value when the summed amount is the same or is smaller than the storing limit amount and determining whether the value equals the value extracted from the first balance information, said certain key value is provided from a second certification and not from a radio communication service provider and said certain key value is previously stores; and encrypting the first balance information as a certain key value when the encrypted value is equal to the extracted value and changing to a

Art Unit: 3624

decimal value and displaying the decimal value; formatting the data contained in the second balance storing information and encrypting using a certain key value of the certification provider; determining whether the encrypted value is equal to an encrypted value contained in the second balance storing information; and determining that the signal is a proper signal if the encrypted values are equal; wherein said encryption step is performed using a certain key value provided from the first and second certification providers (column 9, line 41 thru column 10, line 33). Janning fails to teach storing the balance string extracted from the radio signal after the comparing of the extracted serial numbers. Takami teaches an electronic money transaction system in which a radio transmitter is used and ID's from the radio transmitter are compared to approve electronic money information. Further, after the ID comparison, the IC card stores the transmitted electronic money information into the electronic money information memory (column 12, lines 32-42). It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Janning to include storing the electronic money information as taught by Takami because Janning already teaches memory for storing billing information (column 11, lines 30-44). Storing the balance information after the number (ID) comparison is approved would update the billing information for the next transaction, which has to reference the memory.

9. Claims 5, 6, 8, 9, 15 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janning et al. (hereinafter Janning) U.S. Patent 6,446,049 in view of Takami et al. (hereinafter Takami) U.S. Patent 6,536,661 in further view of Davis et al. (hereinafter Davis) U.S. Patent 6,105,006.

Art Unit: 3624

Regarding claims 5, 6, 8, 15 and 23-25 Janning and Takami teach a display unit for displaying general information or balance storing information as a character or digit. Janning and Takami teach radio frequencies to send signals to customers to inform them of financial information. Janning and Takami fail to teach a tone signal generator for generating a call sound or an error sound during the balance storing operation by the control means. Davis teaches a financial messaging system over radio frequency in which audio signals are used to signal error messaging during the transaction and service is stopped with improper signals (column 11, line 59 thru column 12, line 5 and column 23, lines 27-38). Therefore it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Janning and Takami since both Janning and Takami and Davis teach storing electronic money with the use of radio frequency and comparing pertinent encrypted data to complete transactions. There is sufficient motivation to combine references because it provides an efficient manner for communicating messages to users for operations important to a customer and provide common auditory signals for unsuccessful transactions that a customer would be familiar with and easily comprehend.

Claim 9, Janning teaches the control means is designed to decrypt an output signal of the radio signal receiving block, extract a certification information if there is a service stop signal, disables the memory block when the extracted certification information is coincided with the previously stored certification information, and stop the service of the card (column 9, line 59 thru column 10, line 32).

Art Unit: 3624

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefano Karmis whose telephone number is (571) 272-6744. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (571) 272-6747. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully Submitted
Stefano Karmis
01 September 2005

**VINCENT MILLIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600**

